

OROGRAPHY DIVISION

REQUIREMENTS FOR ORR READING PANEL

July 1950

SECRET

May 1958
All Components
D/GG/RR

Mapping Data, Map Enclosures, General Studies

A. Mapping Data

In addition to other topical requirements, the Geography Division has special requirements within the field of mapping. The following subjects form a general guide; all information is desired:

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| 1. Mapping organizations;
geographic and geologic
institutes and societies | (1) History
(2) Present organization
(3) Surveying work under way
(4) Lists of publications |
| 2. Competency of agencies or
individuals in mapping field | |
| 3. Reliability of particular
maps | (1) Corrections
(2) Source materials
(3) Dates; revisions
(4) Criticisms |
| 4. Sources used in map
compilations | (1) Agencies
(2) Surveys
(3) Other maps |
| 5. Surveys | (1) Types
(2) Dates
(3) Plans
(4) Revisions
(5) Reliability |
| 6. Mapping programs and
mapping deficiencies | (1) Programs under way and projected
(2) Areas inadequately mapped
(3) Weaknesses in existing maps |
| 7. Geodetic data | (1) Diagrams of triangulation nets
(2) Control points (lists)
(3) Gravimetric stations/points |
| 8. Aerial photography | (1) Extent
(2) Types
(3) Dates
(4) Plans
(5) Reliability
(6) Use in mapping |
| 9. Mapping methods | (1) Improvements
(2) Local variations |

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10. Place names
 - (1) Lists, gazetteers
 - (2) Changes
 - (3) Transliteration methods
 - (4) Local usage
11. Personnel
 - (1) Geographers
 - (2) Cartographers
 - (3) Explorers, etc.
12. Expeditions
 - (1) Surveying
 - (2) Scientific
 - (3) Exploring
13. Map collections
 - (1) Location
 - (2) Content
 - (3) Use
14. Map procurement
 - (1) By U.S. agencies
 - (2) By other countries
15. Transmittals of:
 - (1) Maps
 - (2) Map indexes
 - (3) Map catalogs
 - (4) Atlases

B. Map Enclosures

Wherever possible, original map enclosures should be attached to the copy of any report sent through the Geography Division on routing. However, please route all reports to which maps were attached -- even if map does not accompany the copy in hand.

C. General Studies

Route all reports or studies containing information that describes areas, analyzes regional or topical problems, gives economic developments or trends, and similar broad treatments.

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I. Geodesy, Gravimetry and Cartography

Topical Outline Guide

Following is a guide to subjects on which there is need for general information or specific data that applies to the USSR, the Satellites, or any other area closely associated with the Soviets in interest or activities. Emphasis should be placed on postwar information and data. Particular attention should be directed towards the reporting of all Soviet "scientific" activities and those sponsored or supported by the Soviets, including any information exchange programs of areas peripheral to the USSR.

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1. Geodesy
 - Triangulation (all orders)
 - Traverse (Poligonometriya; Russian)
 - Adjustment of observations
 - Data (Pulkovo, Svobodny)
 - Measurement of base lines
 - Measurement of long arcs
 - Determination of earth's radius from arc measurement
 - Intercontinental ties with USA via Alaska
 - Extension of Soviet datum into other countries
 - Theodolites, surveying apparatus and instruments
 - Radar and Shoran (or equivalent) methods in surveying
2. Astro-Geodesy
 - Lafayette stations
 - Azimuth determination
 - Astronomic coordinates of position
 - Longitude determination
 - Latitude determination, variation of latitude
 - Standards of accuracy in astro-measurements
 - Time, signals, time service
 - Instruments in use in astronomic and time observations
 - Eclipse activities
 - Lunar photography
 - Oculation of stars
3. Gravimetry
 - World program planned by USSR
 - Gravity stations in USSR
 - Isostatic topographic reductions
 - Gravity measuring instruments for use on land
 - Gravity measuring instruments for use at sea
 - Gravimetric anomalies (free air, Bouguer)
 - Gravity in relation to guided missiles and earth satellite
 - Gravity requirements for missile systems

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4. Leveling
Determination of mean sea level
Datum for leveling (Kronstadt)
Leveling instruments
Refraction corrections necessary in leveling
5. Cartography
Compilation units (Aerogeodezicheskiye
Predpriyatiya)
Map publishing plants (Kartograficheskiye
Fabriki, and Kartograficheskiye Predpriyatiye
of ministries)
Topographic map series: large- and small-scale
Plans for map production, domestic and foreign
Sheet lines for topographic maps
Soviet map symbols
Security provisions in guarding mapping data
and source materials
Map compilation instruments
6. Photogrammetry
Plans for USSR coverage
Plans for securing necessary ground control
Air-photo triangulation
7. Key Words,
Phrases, and
Topics
Deflection of the vertical (station error)
Ellipsoid of reference (Clarke 1866, Bessel,
International, Krasovskiy)
Triaxial ellipsoid
Geoid
Undulations of the geoid
Solar eclipse method of connecting data
Star occultation method of connecting data
Geodetic control (geodetic network)
Geodetic control (positioning) for guided missiles
Isostasy
Gauss-Krueger projection
Electronic and optical methods of distance measurement

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II. Antarctica -- Activities by All Countries

- A. Plans and Programs
 - (1) IGY
 - (2) Academy of Sciences (all countries)
 - (3) Governmental
 - (4) Non-Governmental
- B. Field Activities and Operations
 - (1) Bases -- Temporary and permanent
 - (2) Expeditions -- Land, air, and sea
 - (3) Explorations
 - (4) Equipment, including instruments
 - (5) Polar navigation techniques
 - (6) Personnel
 - (7) Maintenance and supply
 - (8) Cold weather survival
 - (9) Polar logistics and support
 - (10) Transportation -- Sea, air, surface
- C. Research Activities
 - (1) Surveys -- Mapping and charting
(geodesy, gravimetry, cartography)
 - (2) Aerial photography
 - (3) Meteorology
 - (4) Oceanography
 - (5) Topography -- Landforms, iceforms,
drainage, sub-ice relief, vegetation,
outcrops (nunataks)
 - (6) Geology
 - (7) Resources, including whale, seal,
fish, minerals
 - (8) Glaciology
 - (9) Polar navigation problems
 - (10) Environmental protection problems
 - (11) Satellite observations and rocket
operations
- D. Political
 - (1) Claims and sovereignty
 - (2) International relations, disputes
 - (3) U.N. activities
 - (4) Reported military activities
 - (5) Demilitarization, peaceful uses
 - (6) Administration
 - (7) Problems of international law
 - (8) Evolution of policies
- E. Exchanges
 - (1) Personnel, observers
 - (2) Data, publications

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F. Whaling

- (1) Open seasons
- (2) Quotas
- (3) Catch
- (4) Oil production
- (5) Vessels and methods; factories;
catcher boats
- (6) Conservation
- (7) International conventions, conferences

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III. Western Hemisphere

A. Natural Features

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| 1. Terrain | All information | (1) Plains, valleys, mountains, passes, caves, volcanoes, beaches, coastlines
(2) Physiographic (geomorphic)
(3) Spot elevations
(4) Natural disasters such as earthquakes, volcanic eruptions, floods, landslides |
| 2. Drainage | All information | (1) Courses of rivers, perennial or intermittent
(2) Nature of flow
(3) Periods of high and low water
(4) Potability of water
(5) Marshes and swamps
(6) Subsurface drainage
(7) Water supply, springs, etc. |
| 3. Vegetation | All information | (1) General information on vegetation zones
(2) Types of timber trees and their location
(3) Forest reserve areas
(4) Edible plants and their distribution
(5) Poisonous plants and their distribution |
| 4. Soils | General information. No soils chemistry, structure or cross sections | (1) Distribution of soil types
(2) Conservation and stabilization of soils: tree belts, grasses |
| 5. Geology | General information | (1) Surface areal geology
(2) Unexploited mineral reserves
(3) Water table depths |
| 6. Climate | All descriptive and statistical data which would aid in the climatic analysis of an area | (1) Climatic regions
(2) Seasonal descriptions
(3) Temperature
(4) Precipitation
(5) Winds, air masses
(6) Visibility, cloudiness |

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B. Cultural Features

1. Transportation and Communications

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| a. Roads | All information except volume of traffic, equipment, grades, axle load | (1) Alignment
(2) Surface, foundation, width
(3) Seasonality
(4) Bridges, tunnels, ferries
(5) Distances
(6) Construction under way; proposed plans |
| b. Railroads | All information except volume of traffic, weight of rails, grades, curves | (1) Alignment, trackage
(2) Gauge; and interchange points
(3) Electrification
(4) Bridges, tunnels, ferries
(5) Stations, terminal points, timetables
(6) Sidings, passing loops, marshalling yards
(7) Ownership
(8) Distances
(9) Construction under way and plans
(10) Abandoned lines |
| c. Inland waterways: canals, navigable rivers, and lakes | All information | (1) Alignment
(2) Minimum widths and depths
(3) Seasonality
(4) Location of locks
(5) Ownership
(6) Location of docks |
| d. Oil, gas, and water pipelines | All information except details of servicing and operations | (1) Alignment
(2) Surface or underground
(3) Size
(4) Pumping and booster stations
(5) Ownership |
| 2. Political boundaries, international and internal | All information (including Treaty basis for and description of boundaries) | (1) Boundary locations; status, definition, delimitation, demarcation, recognition by US
(2) Boundary changes
(3) Boundary problems
(4) Changes in administrative divisions or capitals |

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| | | (5) Special administrative divisions |
| | | (6) Sovereignty status (independent nation, colony, protectorate, etc.) |
| | | (7) Territorial waters; marginal seas |
| | | (8) Territorial claims |
| 3. Population | All information except unofficial estimates | <p>(1) Statistics by small or medium-sized units</p> <p>(2) Distribution and density; movement of people; change in patterns</p> <p>(3) Ethnography; race, nationality, tribe, religion, language</p> <p>(4) Census programs</p> <p>(5) Health: incidence of disease</p> <p>(6) Colonization; settlements</p> |
| 4. Agriculture and forest crops | Broad treatment, trends | <p>(1) Annual reports</p> <p>(2) Agricultural projects: irrigation, drainage, colonization, reclamation</p> <p>(3) Systems of land tenure</p> <p>(4) Land use</p> |
| 5. Minerals, including petroleum | All information except technical problems in production | <p>(1) Mine sites and oil fields; installations</p> <p>(2) Annual tonnage and average grade of ore; oil yields</p> <p>(3) Processing plants, locations</p> <p>(4) Services: water supply and power supply; loading facilities</p> <p>(5) Transportation facilities</p> |
| 6. Other occupations: commercial fishing, lumbering | All information exclude individual sawmills | |

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| 7. Power | Information on major plant locations and dams only; no small industrial power plants | (1) Hydro-electric plants
(2) Thermo-electric plants
(3) Construction projects
(4) Regional developments
(5) Dams |
| 8. Water supply | All information of a general nature | (1) Reservoirs
(2) Purification works
(3) Dam sites |
| 9. Cities and towns | All descriptive or analytical information except individual buildings | |
| 10. Military data | Only general information | (1) Military administrations
(2) Military zones
(3) Occupation zones |